

REMARKS

Claims 1-2, 8 and 10 have been rejected under 35 USC 103(a) as being unpatentable over U.S. patent no. 6,163,233 ("Adkins") in view of U.S. patent no. 6,355,198 ("Kim").

Claims 3-7 have been rejected under 35 USC 103(a) as being unpatentable over Adkins and Kim in view of U.S. patent no. 5,219,787 ("Carey").

Applicant respectfully traverses this rejection because the cited reference does not disclose every element of any of the pending claims, as the following analysis shows.

Independent claim 1 recites that the first and second optically transparent materials in the first and second optically transparent holes are optically aligned to form an optical waveguide. The Office Action uses Adkins to attempt to show the physical structure of the claimed apparatus, and uses Kim and Carey to show that optical waveguides exist (which is not disputed) and to attempt to show some of the details of some of the dependent claims. The Adkins reference is inapplicable for several reasons: 1) Adkins discloses an electrical waveguide, not an optical waveguide. 2) The Office action equates the vias of Adkins with the optical waveguide of the application. However, the electrical waveguide of Adkins is in the planar structure that run perpendicular to the vias (column 4 line 47). The vias simply provide common ground connections (column 4 lines 61-63). By contrast, the optical waveguide of the claims is in the material-filled holes that are perpendicular to the planar structure. The planar structure merely provides mechanical support for the optical waveguide. Thus the electrical waveguide of Adkins has a completely different physical structure than the optical waveguide of claim 1. 3) The vias of Akins are always filled with

electrically conductive material, which is optically opaque and therefore completely useless as an optical waveguide.

Thus, Adkins fails to disclose or suggest the physical structure that is claimed. Kim and Carey do not show this physical structure, and were never cited as doing so.

Claims 2- 8 and 10 depend from claim 1 and therefore contain the same limitations not disclosed by Adkins.

Claim 9 has been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 9 has been rewritten in the manner suggested. Withdrawal of the objection to claim 9 is respectfully requested.

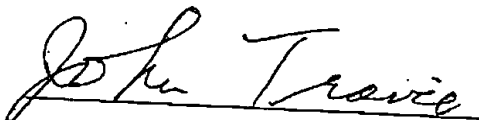
CONCLUSION

For the foregoing reasons, Applicant submits that the application is now in condition for allowance, and indication of allowance by the Examiner is respectfully requested. If the Examiner has any questions concerning this application, he or she is requested to telephone the undersigned at the telephone number shown below as soon as possible. If any fee insufficiency or overpayment is discovered, please charge any insufficiency or credit any overpayment to Deposit Account No. 02-2666.

Respectfully submitted,

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